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| APPLICATION NO.            | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------|---------------------|------------------|
| 10/808,918                 | 03/24/2004  | Guenter W. Brune     | DCI-21D1            | 8053             |
| 21833                      | 7590        | 01/19/2006           | EXAMINER            |                  |
| PRITZKAU PATENT GROUP, LLC |             |                      | AURORA, REENA       |                  |
| 993 GAPTER ROAD            |             |                      | ART UNIT            |                  |
| BOULDER, CO 80303          |             |                      | PAPER NUMBER        |                  |
|                            |             |                      | 2862                |                  |

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,918

Applicant(s)

BRUNE ET AL.

Examiner

Reena Aurora

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2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 44 is/are pending in the application.
- 4a) Of the above claim(s) 7 - 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This communication is in response to amendment received on 12/8/05.

Claims 1 – 6 are presented for examination.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eslambolchi et al. (6,373,252) in view of Chau et al. (4,806,869).

As to claim 1, Eslambolchi et al. (hereinafter Eslambolchi) discloses a method and apparatus for locating a cable in a pipe comprising the steps of: using a locator (20, fig. 1), sensing a first locating signal strength at a first operator determined distance (24) generally in vertical alignment with an overhead surface position which is generally overhead of the cable (10); measuring the first operator determined distance (24) from the overhead surface position; sensing a second locating signal strength at the second operator determined distance (26); measuring the second operator determined distance from the overhead surface position (26); and determining the depth of the cable (10) using the first and second signal strengths and the first and second distances (5, col. 2, lines 65 – 70; col. 3, lines 64 – 68 and col. 7, lines 1 - 20). Eslambolchi fails to disclose

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moving the locator to a second operator-determined distance from the overhead surface position generally in vertical alignment with the overhead surface position. Chau et al. (hereinafter Chau) discloses a technique for locating the position of a boring device within the ground with respect to a particular reference location wherein the locator is being moved to a second operator determined distance from the overhead surface position generally in vertical alignment with the overhead surface position (fig. 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Eslambolchi with the teachings of Chau such that moving the locator to a second operator determined distance would reduce the size of the device.

As to claim 4, Eslambolchi discloses a method and apparatus for locating a cable in a pipe comprising a first arrangement (24, fig. 1), for sensing a signal strength of the locating signal at an operator determined distance from a surface position on the ground; a second arrangement (26) for measuring the operator determined distance from the surface position; a processing arrangement (30) cooperating with the first and second arrangements and configured for accepting a first signal strength measured at a first operator determined distance generally vertically above a particular surface position on the ground which is itself generally vertically above the cable and a second signal strength measured at a second operator determined distance generally vertically above the particular surface position and configured for determining a depth of the cable (10) using the first and second signal strength measurements and the first and second operator determined distances. Eslambolchi fails to disclose moving the locator to a

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second operator-determined distance from the overhead surface position generally in vertical alignment with the overhead surface position. Chau et al. (hereinafter Chau) discloses a technique for locating the position of a boring device within the ground with respect to a particular reference location wherein the locator is being moved to a second operator determined distance from the overhead surface position generally in vertical alignment with the overhead surface position (fig. 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Eslambolchi with the teachings of Chau such that moving the locator to a second operator determined distance would reduce the size of the device.

Claim 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eslambolchi et al. (6,373,252) in view of Chau et al. (4,806,869) as applied to claims 1 and 4 above, and further in view of Mercer (5,337,02).

As to claims 2 and 5, Eslambolchi and Chau fail to show that the first and second operator determined distances each include the step of ultrasonically detecting distance to the surface of the ground using the locator. Mercer discloses a locator device including an ultrasonic transducer for measuring the height of the locator above the surface of the ground (col. 13, lines 27 - 32). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Eslambolchi in view of Chau further with the teachings of Mercer such that

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including an ultrasonic transducer for detecting the distance of the locator to the ground would provide accurate distance between the locator and the ground.

***Allowable Subject Matter***

Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 1 - 6 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Reena Aurora